

**FAIRCHILD**

A Schlumberger Company

**FDH300/FDLL300**  
**FDH333/FDLL333**

T-01-09

High Conductance Low  
Leakage Diodes

- BV...150 V (MIN) @ 100  $\mu$ A
- $I_R$ ...1.0 nA (MAX) @ 125 V (FDH300), 3.0 nA (MAX) @ 125 V (FDH333)

**ABSOLUTE MAXIMUM RATINGS (Note 1)****Temperatures**

Storage Temperature Range

Maximum Junction Operating Temperature

Lead Temperature

-65°C to +200°C

+175°C

+260°C

**Power Dissipation (Note 2)**

Maximum Total Dissipation at 25°C Ambient

Linear Derating Factor (from 25°C)

500 mW

3.33 mW/°C

**Maximum Voltages and Currents**

WIV

Working Inverse Voltage

125 V

 $I_O$ 

Average Rectified Current

200 mA

 $I_F$ 

Forward Current Steady State

500 mA

 $I_F$ 

Recurrent Peak Forward Current

600 mA

 $I_F$ (surge)

Peak Forward Surge Current

Pulse Width = 1.0 s

1.0 A

Pulse Width = 1.0  $\mu$ s

4.0 A

**PACKAGES**

FDH300 DO-35

FDH333 DO-35

FDLL300 LL-34

FDLL333 LL-34

If you need this device in the SOT package, an electrical equivalent is available. See FDS01500 family.

**ELECTRICAL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted)**

SYMBOL	CHARACTERISTIC	FDH300		FDH333		UNITS	TEST CONDITIONS
		MIN	MAX	MIN	MAX		
$V_F$	Forward Voltage			0.9	1.15	V	$I_F = 300$ mA
				0.88	1.08	V	$I_F = 250$ mA
			1.0	0.87	1.05	V	$I_F = 200$ mA
				0.86	0.97	V	$I_F = 150$ mA
				0.92	0.83	V	$I_F = 100$ mA
				0.88	0.80	V	$I_F = 50$ mA
				0.8		V	$I_F = 10$ mA
				0.75		V	$I_F = 5.0$ mA
				0.68		V	$I_F = 1.0$ mA
						V	
$I_R$	Reverse Current		1.0		3.0	nA	$V_R = 125$ V
			3.0			$\mu$ A	$V_R = 125$ V, $T_A = 150^\circ\text{C}$
					500	nA	$V_R = 125$ V, $T_A = 100^\circ\text{C}$
C	Capacitance		6.0		6.0	pF	$V_R = 0$ , $f = 1$ MHz
BV	Breakdown Voltage	150		150		V	$I_R = 100$ $\mu$ A

**NOTES:**

1. The maximum ratings are limiting values above which life or satisfactory performance may be impaired.
2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.
3. For family characteristic curves, refer to Chapter 4, D2.